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In This Issue

Scientists and Economic Change
THOMAS W. DAVIS

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The Chemist in Advertising
FRANKLIN H. BIVINS

25 cents a copy

The CHEMIST

Publication of

THE AMERICAN INSTITUTE OF CHEMISTS, INC.

EDWARD L. GORDY, *Editor*, 233 Broadway, New York City

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The Man of Science and Economic Change

By Thomas W. Davis

Progress in pure science will go on under any political system. Would applied science advance more rapidly under socialism? One picture of a planned society.

THE recent pronounced tendencies economically and politically toward a modified social order lead the scientific man to inquire what shall be the status of his group when some new stable ordering of society emerges from the present flux of change. On the whole, the man of science is not primarily interested in the social order under which he works. This is especially true of men of the first rank. Lomonosoff, Lavoisier, Newton, Gallileo, Darwin, Pasteur, Edison, and Einstein worked in widely different times and under widely different systems. Yet we feel sure that they would have achieved pretty much the same ends whatever the system might have been. Progress in pure science is as inevitable as our own natures and would be practically assured regardless of political and economic arrangements.

We are quite safe in inferring that our advance in fundamentals will continue at an undiminished rate. That we can by any controlled means increase the number of geniuses in science—or decrease it—is extremely doubtful. Whether we come eventually to a system of socialism or to some other, we need have no fears for basic scientific progress. Lomonosoff probably was little concerned with the occupant of the royal throne of Russia while he worked. His chief interests were in science, and to science he devoted himself with rare skill. The opinions and intrigues of the Russian court took up little of his thought. Had a group of socialists been in control of the Russian government of his time, the problems of physical chemistry would have seemed to him just as important, and he would have been as concerned with solving them. Similar remarks apply with equal force to the other pioneers of science. We may note that Professor Einstein has continued his scientific contributions despite the fact that he has seen three distinct administrations in the German government—and may see more.

Parallel with the work of the outstanding men of science, and indeed

in large part based upon it, has proceeded the work of the second-class scientists and the technologists and engineers. We note that the work of this large group depends more importantly on organization and on social and economic circumstances. The nations of the earth vary tremendiously in the rate of their scientific development, and a single nation varies from one period to another. Part of this is to be accounted for by variations in the temperament of the people, their traditions, and part by difference in institutions. But give the average well-founded scientific man a sufficiency of food, clothing, security, and research material and he will earn his keep. Progress will be assured, whatever economic system can guarantee these minimum essentials.

THE number of persons who can and will work in science, and their efficiency, will most decidedly depend on the economic system. Economics has everything to do with the rate of application of scientific findings to industry. More rapid progress will follow when work is better organized and more quickly applied. When Charles P. Steinmetz was asked whether he thought he would have as great an incentive to work under a socialistic order as he had as consulting engineer with the General Electric Company, he declared, "Under socialism I would have even greater incentive than at present. If I invent anything now, the invention accrues immediately to the advantage of the General Electric and its full benefits reach society only after a long period of time. Under Socialism, anything invented could be used immediately by the entire industry and sold to the public at cost."

On another occasion, Dr. Steinmetz wrote: "Obviously in a socialistic society there would be no special interests opposing the inventor's fullest recognition, no man belittling and denying the invention for commercial reasons, and the realization that a successful invention would be immediately adopted by the whole national or even international industry, and used for the common good, that it would make the inventor a national hero, but a hero of creation and not of destruction—as have been most heroes of past days—all this will necessarily be an incentive for the inventor far greater than anything present-day society has to offer."

Dr. Steinmetz is of the opinion certainly that more rapid progress will follow when work is better organized and more quickly applied. Economics has everything to do with the rate of application of scientific findings to industry; and economics therefore determines the

number of persons who will work in science. Let us see in what ways socialism would alter present-day practices.

A SCIENTIST today is largely an anarchist in his methods; the entrepreneur is more so: there is little coordination in scientific work. Any one who wishes to enter the chemical or chemical engineering fields as a life work is at liberty to do so provided he can finance his education. If one may judge from the number of defections from the ranks—and the number ought to be larger—a great many young men who undertake to become chemists and chemical technologists should never have been allowed to try the impossible. Once a man has acquired a degree or a series of degrees, his placement is left to chance. Many men find proper jobs, but at least an equal number, through improper advice and lack of contacts, get into positions they are not fitted for. The existing channels do not assure the right man getting to the right place. Industry and education are glutted with perpetual misfits.

One of the first innovations to be instituted under a system of technocracy or socialism would be a thorough personnel and vocational guidance for all chemists and chemical engineers beginning, say, with the time men enter high school. This service would necessarily be operated in close cooperation with that of other professions. The savings in increased efficiency and in human happiness would make the project worth while. The substitution of planned control in the education and placement of our chemists and engineers for the present hit-or-miss practice typifies the difference between a system of socialism and capitalism. While the efficiency of individual industries today is remarkably high and indicates individually what could be obtained generally, guidance for the individual and correlation between industries is almost entirely lacking.

Since the essence of the distinction between socialism and our present capitalism is plan and social control, we should consider in what way plans will be drawn up and executed to insure steady industrial production and ordered scientific advancement. Just who will do the planning and for what? And who will see that plans are translated into action? While the general principles are definite and easy to follow, we can not foretell the precise way organizations will be coordinated in the newer systems. Yet we may allow ourselves here a little imagination in supplying the details.

PROBABLY in the new order, legislative bodies will be organized much as today, but with more centralization, and considerable simplification. The permanent central governing agency will be much smaller than today and will be less restricted in the scope of its activities. In this body will rest the supreme authority of the land, second only to the people themselves. Under the jurisdiction of this central authority and partially selected by it will be a planning council created to draw up and supervise plans for construction, for production, distribution, and exchange. This board will consist of representatives of the central legislature, of regional legislatures, of consumers, of industries, and of the professions. In this planning body would be found one or more representatives of the chemical profession—either in a voting or consultative capacity. These persons would be chosen through some democratic means by the professional society or by representatives of industries or both. In a crude way, their function would be somewhat like that of legislative lobbyists, but with the important difference that they would represent working rather than owning interests.

When coordinated plans for construction and production had been prepared and accepted for a specified period of time by the Planning Council, their consummation, as regards chemical work, would be entrusted to a chemical director, under whom would be placed one or more assistant directors in charge of special activities such as training and personnel, research, fine and heavy chemical production, and liason with other groups. Responsible to these assistant directors and to the director himself there would be regional and group boards of control and in turn the various plants, shops, factories, and schools engaged in chemical work.

The successful functioning of these units would be the concern of their boards of directors and managers. These boards correspond exactly to present boards of directors, except that they would manage directly and would be on the job continuously. On these boards will be found representation of the workers and managers of the particular unit or group of units, of consumers, and of allied industries. For example, a board of a dozen persons in charge of a petroleum unit might consist of five representatives from the workers, four from the management, one from the appropriate mining or geology group, one from transportation, and one from the automotive industry. This board in turn would see that representatives were sent to regional organizations, to the mining units and so on. This board would recruit its own per-

sonnel, adopt quotas of work, allot wages, arrange for procurement of material and for disposal of products.

This general scheme would be modified to meet special circumstances. The provisions to allow employee and management representation on the board deviate from present practice rather importantly. Provisions would be made to assure steady employment, adequate pay, and care for the injured, the aged, and the incapacitated in the industry—encouraging, thereby, faithful work. If the scheme sounds like militarization, one must remember that present efficiency in chemical industry has been at just this cost and really because of it. Anarchy of action and community of result do not go together. Efficiency requires order, organization, and plan.

PROFESSIONAL societies will continue organized much as today, except that there would be greater coordination, and probably the more important of present-day societies will be established as subdivisions of a national chemical society. The work of these groups will continue to be largely educational. The unskilled workers will be organized into similar groups. Together the professionals and workers will be represented on regional and national boards.

Universities will continue, undoubtedly, with a great deal of academic freedom and perogative, but more vocational planning will be brought into being, so that only those men well qualified may continue into a given field of endeavor. When a young man or woman is accepted into the chemical profession, his or her further education should pass into the control of a chemical rather than a general educational board.

With adequate planning, efficient management, and community of feeling, there is no question that the man of science could look to the new order with some confidence. He will be more likely to get into the right job; he will attain that security reserved for public employees, so that his mind will be freed from economic worries; and his sense of having representation in the industrial scheme will encourage his best efforts. These imaginary arrangements may never be achieved totally, but the tendency today is toward something like them, and that tendency need give the chemist and chemical engineer no alarm.

The Chemist in Advertising

By Franklin H. Bivins*

Truth in advertising copy. Chemists can supply facts which the buyer wants and the manufacturer needs.

TOO much advertising has Barnum's sucker-a-minute viewpoint, and too little remembers that "you can't fool. . . all of the time." The public may want to be deceived by magicians and circuses; but does it want to be deceived by tradespeople?

Misleading statements and sham have no place in advertising which seeks to sell a customer and keep him sold. Regardless of whether such dissimilar movements as Consumers' Research and *Ballyhoo* are of themselves to be taken seriously, they are placards of a real protest against puff advertising.

More copy should be written to the customer and less to the copywriter's superiors or to the company's competitors. There is beginning to be evidence that the ultimate consumer wants some plain unvarnished truth and some facts from which correct conclusions have been drawn. He is tired of pretty but misleading half-truths and flights of fancy.

Possibly some luxury advertising ought never to be more than a picture of a pretty girl; but much other advertising, of more important products, should try to tell a true story. Thus far too few of the stories have been true.

One powerful advertising weapon is chemistry—real chemistry and not pseudo-chemistry. A picture of a white-coated, bearded, benevo-

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lent-looking oldster was probably advertising's first use of science; but any artist can draw a picture. Next came testimonials, which foundered and failed, due partly to the startling sameness of the statements from different people and partly to the general and evasive quality of these pseudo-scientific documents.

Too many advertisers use a brand of science that smells like a breeze from a codfish drier and then wonder why the ad doesn't pull. "Our coffee is packed in a vacuum to *prevent evaporation* of the aroma." There's a handicap for the entertainment to work off!

A few advertisers try to use science to deceive. One company is said to have used its knowledge of psychology to bring about the desired result of a blindfold test. The ads got more publicity, possibly, than any other advertising campaign has ever received; but they conspicuously failed to sell cigarettes.

Chemical data carefully prepared and carefully interpreted by a neutral and unbiased organization will do much to overcome popular prejudice. The test of time and use will bear out the findings of correct chemical data properly interpreted. This will mean increased public confidence in scientific advertising. The sales appeal of truth can grow with startling rapidity.

KENNETH GROESBECK, in *Printers' Ink*, September 24, 1932, has mentioned ten pitfalls of advertising:

1. Ignorance of facts. 2. Insincerity. 3. Dishonesty. 4. Cleverness. 5. Superficiality. 6. Stodginess. 7. Bad aiming. 8. Lack of power. 9. Cold feet. 10. Crooked thinking.

Wherever the advertised product is susceptible to chemical opinion, the majority of these faults can be avoided. With the knowledge of a trained chemical specialist pervading the copy, ignorance, insincerity, dishonesty, superficiality, stodginess, lack of power, and crooked thinking can be overcome. Straightforward, logical, knowledge-giving facts can make copy different and powerful rather than merely clever. To a marked degree continued use of properly conceived and censored scientific copy will reduce bad aiming and cold feet.

Chemical data in advertising, as in the laboratory, should be handled by trained chemists. Any tool is dangerous to a man unaccustomed to its use. In unskilled hands the hammer too frequently hits a finger. We do not know the sales effect of a fairly recent cigarette ad based on a coolness test; but the advertisement was quickly discontinued. It ought to have been withdrawn before it appeared. The conclusions

drawn by the writer of the advertising copy were unwarranted by the chemical tests.

CHEMISTRY can also help in landing accounts. An account representative must have a general knowledge of his prospective client's field. He is still better off with even a small technical knowledge. A general idea of the chemistry of the tobacco industry or a talking knowledge of the detergent and soap field gives him an edge on other advertising salesmen. He can talk his prospective client's language. This knowledge helps in suggesting new lines of advertising attack and is particularly valuable at the present time, when manufacturers are so carefully scrutinizing all expenditures.

Another field in which the chemist can play an important part is the market survey and the general preparation for an advertising campaign. Few surveys are complete without work by a chemist or a chemical economist. A company must know the answer to many questions. Is our product reliable and pure? Can it compete in the open market on a cost basis? How about patents? Can we develop new uses, or expand certain desirable features? Is our quality consistently up? How much will we have to spend for a plant that will produce the needed volume? Is there plenty of raw material, at a price we can pay? Need we fear new technological discoveries?

This only blocks out in the rough the help a chemist can be in the market survey and general preparation for an advertising campaign.

Mr. John Benson, president of the American Association of Advertising Agencies, outlined two schools of advertising thought, in a recent address before the League of Advertising Women. The first school believes in truthful and sound copy. The second believes that "advertising is a type of special pleading, like a lawyer's brief. An advertiser may undermine his competitor if he tells the truth, even though he does not tell the whole truth."

The far-sighted advertising man must agree with Mr. Benson in preferring the first type. That agreement will then logically lead in many types of copy to the statement of facts certified by a reliable, unprejudiced consulting chemist, just as a balance sheet must be certified by a C. P. A.

Code Correspondence

From **H. Rose,** chief of the control section of the NRA:

This acknowledges receipt of one copy of a code of fair competition for your profession.

Section 3a of the National Industrial Recovery Act under which codes are at present being filed is intended to be used by groups of employers in each trade or industry or subdivision thereof. It is not intended for use by groups of employees in promulgating codes to regulate the trade or industry in which they are employed.

A close inspection of this code, your Constitution and By-laws shows a service organization. Under the provisions of Section 7b of the National Industrial Recovery Act the employers and employees of an industry may establish, by mutual agreement, the conditions relating to hours, rates of pay, and other conditions of employment, and when approved by the President, such agreements have the same effect as the employers' code which has been approved. A code which pertains to labor or service only does not come within the meaning of the National Industrial Recovery Act.

Abstract of **Howard S. Neiman's** letter of reply:

It would appear that this code might be acted upon under Section 7c of the Act.

The code calls for the setting aside of money against the wearing down of the human ability to operate. This charge is to be added to the cost of the product. Had this idea been in effect for the past twenty years, the present distress would not have occurred.

The American Institute of Chemists believes such a code should be adopted for every employee, in order to place the human element in production on a level at least equal to that of machinery; and that every effort, therefore, should be made by the Administration to approve a code of this character.

From **H. Rose,** replying to Mr. Neiman's letter:

The outline of your Article II, "Protection and Amortization of the Chemist's Investment," is very interesting and approaches an economic Utopia which has been brought out by various economists during the past few years.

The National Industrial Recovery Act specifically states that the

President must accept codes of fair competition for trade and industry only.

Section 7c of the Act provides for certain specific cases where mutual agreements between employers and employees have not been contemplated or effected.

To date 195 codes have been approved. There are under consideration, and gradually being worked to the final stage, several hundred more codes. In practically all these codes there is a clause exempting from certain conditions employees receiving more than a certain minimum wage.

The code you submitted cannot be acted on at the present time by the National Recovery Administration, as it does not come within the purview of the Act "trade or industry."

From **J. W. Harnley,** chief chemist, Griess-Pleger Tanning Company:

I am deeply interested in the "Proposed Code of Fair Competition for the Chemistry Profession," as published in your issue of THE CHEMIST for December, 1933.

Article II is a brilliant and frank exposition of the social philosophy that I believe to be back of the "New Deal."

From **Kurt H. Franke,** F.A.I.C., station and research chemist, South Dakota State College:

It was with pleasure that the Code for Chemists in the December number of THE CHEMIST was read, especially Article II, which considers man as more than an article of commerce. It actually seems human. . . .

There is one fact that cannot be denied, which is that the routine chemist, bacteriologist, and other trained men have enabled creative technology to function; and yet on the basis of (some codes) they would be given less consideration than a craftsman whose training is only a fraction of that of the highly trained scientific worker.

If no attempt is made to raise the standing of the chemist in the various codes presented, it is only natural that business will see that the minimum rate in the codes will be the maximum of these workers.

It is sad but true that men of similar training, employed by public agencies in their laboratories and colleges are in need of this code, just as much as those in private enterprise.

The members of our organization, as well as all other fellow workers, certainly owe the members of the committee which drew up this code the heartiest thanks for the splendid work done.

BY-PRODUCTS

The Newer Genesis

THE Cosmologist has been at it again. In addition to his perturbation over the inescapable Wärmetod of the Universe, he has recently assumed the responsibility of accounting for the universe's existence. In our kindly way we suggested that he fall back upon the doctrine of the eternality of matter.

"That may do for shallow minds," he growled, "but it tangles us up with time, and doesn't solve the problem of timeless matter or immaterial time."

We had though this sort of thing had died away with the Renaissance; and we recommended that he read Lucretius. To our surprise he took the suggestion seriously and crawled away without further comment.

It was three weeks before the Cosmologist again squared away for action. He had been studying Lucretius, having obtained a translation.

"That was a fine idea of yours," he began. "That one about Lucretius."

"How does the political situation strike you?" we replied. "Joined the NRA yet?"

"You will recall," he said, "that Lucretius starts the Universe with everything reduced to single atoms falling steadily in the void."

"Like confetti on Broadway."

"The problem arises out of the fact that under these circumstances nothing else ever can happen; there can be no collisions of atoms and consequently no combinations, no aggregations into larger masses, no stars, suns, or planets. . . ."

"No depressions," we added.

"Lucretius, as you may possibly remember, got out of the difficulty by introducing irregularity in the motion of some atoms so that they might collide with other atoms and so start things off."

"Heisenbergian, nicht wahr?"

"In a way an anticipation of the principle of indeterminancy," he agreed, "but more significantly an introduction of capriciousness which as even you will recognize, quite destroys the mechanism of his system. Physics could never accept Lucretius' ideas. They have been all but forgotten by scientific men."

"Especially the lines:

. . .dum vera re tamen ipse
Religione animum turpi contigere parcet,"

we said.

"Let's keep religion out of it," he suggested. "There's bigger game afoot. I, behold me, have discovered the way out of Lucretius' problem!"

"Pity he's been dead 2000 years."

"My idea," the Cosmologist resumed, "is to transfer Lucretius' system from the Cartesian to the Gaussian coordinates. In this case the direction of atomic motion would be curvilinear instead of rectilinear, the mass of atoms presenting a whirling appearance. . . ."

"Descartes had that in 1640," we observed, hoping to discourage him.

"Descartes postulated a series of local whirlpools or vortices, not one single all-embracing, universal vortex, and furthermore based his cosmology on right line coordinates. My universal motion in curved lines along Gaussian coordinates is totally different. The radius of curvature measured from the center of the universe in all directions gives us a conception of the mass of whirling atoms as a sphere. . . ."

"Why not an oblate spheroid?"

"Not with Gaussian coordinates," he chuckled "and in consequence of the spherical shape of the universe the paths of all atoms at equal distances from the center must intersect an infinite number of times, which makes collisions not only possible but necessary. Q. E. D."

"As we remember it," we said "one of the classical objections to Lucretius is that with atoms moving in the same direction with the same speed, the idea of motion cancels out, and the system appears at rest. How does your brainstorm meet that objection?"

"Easily enough. You haven't quite grasped the significance of spherical motion. While some atoms are going in one direction, others on the opposite side are going in the opposite direction; and those at different distances from the center are moving with different velocities, all of which introduces a relative difference and will give the appearance of motion. The path of each atom, of course, is not perfectly circular, the path being influenced by curvature in three dimensions simultaneously and also by the expansive effect of the system at large. Ignoring the last mentioned effect and visualizing such a path described on the surface of a sphere, the path must pass successfully through every point on the surface. Now if each atom in each level, or distance from the common center, is tracing such a path, each atom is proceding in a different direc-

tion from every other and, as all paths at the same level intersect at an infinite number of points, collisions must be so numerous that the free path of each atom will be infinitesimally small. Collisions will produce larger aggregates or altered velocities which will eventually lead to larger aggregates. . . ."

"However," we interposed, "to an observer within the system and revolving with it, all atoms would appear to be at rest and collision would be impossible."

"There are two reasons why that would not be true," he argued. "The first is that the paths of the atoms are not parallel and the second that the velocities of atoms at different levels must be different. The gravitational influences within the sphere would be distributed differently than on the surface, and the internal atoms would be affected in a different manner from the superficial ones."

"Aren't you assuming that all of your atoms are alike?"

"Of course, they probably are all neutrons." He beamed. "That would most likely be the form in which the primordial radiant energy appeared when it first condensed to a material particle. The great advantage of such an hypothesis is that it gives us an electrically neutral particle to deal with and removes the necessity of taking electrical forces into account until the original system has begun to form complexes."

And so the Universe is accounted for and the Cosmos may now relax into a state of calm security.

They Say

"I do not know which is worse: idealism without knowledge, or knowledge without idealism."—G. SARTON.

"Pure mentality easily becomes trivial in its grasp of facts."—A. N. WHITEHEAD.

"There is plenty of physics and chemistry and mechanics about every vital action, but for a complete understanding of it something beyond physics and chemistry is needed."—SIR OLIVER LODGE.

"Science is every logical connection of facts, whether it be etiological or teleological."

"It is pure prejudice to suppose that only causal connection can form the object of science."—B. BAVINK, "The Natural Sciences."

"The claim advanced on behalf of natural science that it deals with absolute reality cannot be maintained."—LORD HALDANE.

"Deduction from inspired books is the method of arriving at truth employed by jurists, Christians, Mohammedans, and Communists."
—BERTRAND RUSSELL. —*The Autocratic Chemist*

Patent Service

A PATENT attorney who is a Fellow of the Institute has offered to contribute part of his services to the Institute; and he will be glad to hear from members who have patent work to be done. Fees, till a total of a hundred dollars is reached, will be paid into the Institute treasury.

The attorney making this offer to the Institute is at home in all lines of chemical patents, and also in mechanical patents. His specialty is biochemical patents and searches. He can search in all western European languages.

The name of the attorney, and his references, will be supplied by the national office upon request.

BOOK REVIEW

The History of the Phlogiston Theory. By JOHN H. WHITE. *Edward Arnold & Co.*

This interesting and informative book constitutes a thesis approved for the doctor's degree in the University of London where, under the leadership of Professor A. Wolf, the history of science has been raised to rank equally with other departments of knowledge. The work in question compares favorably with the best of the theses in the historical field and, of course, is of especial appeal to chemists. Dr. White has investigated the field covered by this history in a thorough manner and has refuted many false ideas formerly current about phlogiston, some of which this reviewer remembers to have been taught while in school. After a course of text and other books that perpetuate errors of fact and fallacious points of view through the pernicious act of copying from secondary sources, it is refreshing to

turn to a work in which the data and interpretations are based on consultation of original works. This Dr. White has done, and the excellence of his work reflects the thoroughness with which he has sought out every relevant datum. A glance at the author's own summary makes this clear:

"1. The Phlogiston Period was a half-way stage between alchemy and modern chemistry.

2. Stahl's theory owed little to Becher and nothing to Boyle.

3. The gain in weight of calces only presented a problem through the misinterpretation of Stahl's original idea. Stahl conceived phlogiston as a principle; his disciples turned it into a material.

4. The "negative weight" explanation of the above problem was quite foreign to Stahl and was adopted by only a minority of phlogistonists.

5. While in no way depreciating the work of Lavoisier, the ground had been better prepared for him by his predecessors than is generally realized. It was Lavoisier, however, and not Boyle who dealt the death blow to Aristotelian dogma.

6. Under the name "caloric," phlogiston persisted in reality until heat was recognized as a form of energy and not as a material substance.

7. Lavoisier could not clear up all difficulties presented by his theory, and consequently the Phlogiston Theory died a lingering death.

8. The discovery of gases largely increased the vulnerability of the Phlogiston Theory.

9. The Phlogiston Theory was a help to progress as a unifying principle, but was a hindrance in many ways. It did little to stimulate research."

If a reviewer must cavil at a work, we can only note here that the quotation from Geber given in the text is misleading because so much has been omitted. The complete statement of Geber does not certainly lead to the conclusion that he knew of the increase in weight when lead is oxidized to minium.

The book is well printed and is free from typographical errors. It can be recommended to all scholars who appreciate a well-done contribution to the history of chemistry.

J. F. Couch

INSTITUTE NOTES

National Council

The one-hundred and eighth meeting of the Council of The American Institute of Chemists was held at The Chemists' Club, on Thursday, January 18th, with President Henry G. Knight presiding. The following Councilors and Officers were present: Messrs. Breyer, Crossley, Jackson, Kenney, Moody, Morgan, Neiman, Snell, Taggart, and Miss Wall. Dr. Ross A. Baker, Chairman of the New York Chapter, was also present.

The Secretary was directed to write a letter to accompany each bill to the effect that the Institute is not financing itself as to the publication of THE CHEMIST, and that it must be in receipt of all delinquent dues; and to emphasize the fact that the Institute is the only association endeavoring to further the interests of chemists.

The question of advertising in THE CHEMIST was discussed at length.

The Secretary read a letter of January 12, 1934, from Dr. C. D. Ingersoll, Secretary of the New York Chapter, with the following motion which had been adopted by that Chapter:

"The New York Chapter Council ask the National Council to approve a change in Article VI of the Chapter Constitution whereby the word 'council' would be inserted after the word 'chapter' wherever the latter word appears in said article."

Upon motion made and seconded, the amendments to the New York Chapter Constitution were adopted.

The Secretary referred to the Congresses of Agricultural Industries and Pure and Applied Chemistry to be held during March and April in Paris and Madrid and it was reported that as far as is known, no member of the Institute will attend these congresses.

Upon motion made and seconded, the amendments to the By-laws voted favorably upon at the last meeting of the Council were adopted.

Mr. Breyer reported for the committee on ways and means for obtaining new members, composed of Messrs. Breyer, Snell, Ingersoll, Wright, Randall, and Zons. The Committee recommended that a member of the Institute from each university be requested to organize student chapters in his university, and that someone be appointed to obtain new members upon a commission basis.

Upon motion made and seconded, the president was requested to write to the chairman of each local chapter concerning the advisability of student chapters in the universities in his district, and that he appoint a chairman of a membership committee, who in turn would appoint other members of that committee from the educational institutions in the district in an endeavor to form such student chapters.

The committee on ways and means for increasing the membership was discharged with thanks.

Upon motion made and seconded, it was

Resolved, that a member be selected from each state not included within any Chapter and requested to obtain new members.

On motion made and seconded, Messrs. Kenney, Snell, and Crossley were appointed a committee to select a Fellow to be chairman of the membership committee, said chairman to be appointed by the National Council to obtain new members upon a commission basis, and the committee was requested to report at the next meeting of the Council.

Miss Wall reported in detail suggestions for the formation and conduction of a speakers' bureau.

Upon motion made and seconded, Messrs. Breithut and Quigley, and Miss Wall were appointed a committee to organize a speakers' bureau with a limited number of speakers and a limited number of topics, and to report at the next meeting of the National Council.

Upon motion made and seconded, it was

Resolved, that the next annual meeting be held in Atlantic City, New Jersey, on Saturday, May 19, 1934.

Upon motion made and seconded, the Secretary was requested to write the Philadelphia Chapter and ask them to act as host for the annual meeting and to submit suggestions for the same; and that a committee consisting of the chairman and secretary of each chapter be appointed as a Committee on Arrangements for the annual meeting.

The Secretary was requested to submit the file on standard contracts to Dr. Crossley, who will report at the next meeting of the Council.

The Secretary read a letter from Charles H. Herty, Deputy Administrator of the NRA, relative to the Hardwood Distillation Industry.

The Secretary reported that he had received advices from Howard W. Post of the Niagara Chapter that the membership award given by the Chapter would be for a Student membership instead of a Junior membership as previously advised.

The following new members were elected:

FELLOWS

ROBERT SCHMEIDLER, *Chemist*, United Piece Dye Works, Fifth Avenue, Paterson, N. J.

ASSOCIATE

HYMAN I. FEINSTEIN, *Assistant in Chemistry*, Long Island University, 300 Pearl Street, Brooklyn, N. Y.

JUNIOR

GEORGE E. DANALD, *Control Chemist*, Calco Chemical Co., 338 Wilson Avenue, Newark, N. J.

HOWARD S. NEIMAN, *Secretary*

Pennsylvania Chapter

At the January meeting Max Trumper discussed the Tugwell Bill, first outlining the situation which had led to the necessity for further legislation. One of the worst phases of existing conditions is the vast amount of fraudulent or misleading advertising in newspapers, magazines, and on the air. This makes a point of playing upon popular fear, and paints the dire effects of B.O., pyorrhea, halitosis, and dietary faults, notably those involving vitamin deficiencies. Diseases having such origin are actually quite rare, except for rickets in children.

The Tugwell Bill, now known as S 2000 in its modified form, is inseparably linked with the New Deal. One of its most noteworthy features is that statements on labels must be supported by substantial medical opinion or by scientific facts. The bill also fixes penalties for misleading advertising, but as modified by Senator Copeland, it exempts from penalties an advertising agency which gives the names of the advertisers.

It is hoped that the new bill, if passed, will open a new field for chemists, who may be called upon to replace advertising men. Greatly needed are more severe limitations in the amount of lead and arsenic permitted on sprayed fruits and vegetables, as well as education in the art of spraying. Too many people who spray know nothing about how it should be done.

HOWARD STOERTZ, *Reporter*

New York Chapter

A joint meeting with the Chemistry Teachers' Club of New York was held on January 12th, preceded by a dinner at the Childs Restaurant at 109 West 42nd Street. Attendance for the dinner was 79. Ross A. Baker, presiding officer of both organizations, acted as chairman of the meeting.

The speakers of the evening were Harden F. Taylor, president of the Atlantic Coast Fisheries, and M. L. Crossley, research director of the Calco Chemical Company. Both speakers discussed the topic, "What's Wrong with Chemical Education?" The speches will appear in a later issue of THE CHEMIST.

Among those who participated in the subsequent discussion were Jesse E. Whitsit, Ben M. Jaquish, and Frederick E. Breithut.

NEWS

The following Institute members have been nominated for office in The Chemists' Club: **Lewis H. Marks,** president; **Marston T. Bogert,** resident vice-president.

James B. Conant, president of Harvard has received an honorary LL.D. from Chicago for his eminent work in chemistry and his standing in education.

A. Richard Bliss, Jr., F.A.I.C., director of research of the William A. Webster Company, has been elected vice-president of the company.

Dr. Bliss has recently been made director of the Reelfoot Lake Biological Station, maintained by the Tennessee Academy of Science.

Sumner R. Church, F.A.I.C., has been elected president of the American Wood-preservers' Association.

Donald B. Keyes, F.A.I.C., addressed a meeting of the American Section of the Society of Chemical Industry on February 16th on "Cooperative Studies on Sulfur Dioxide Removal from Flue Gases." The meeting was held at The Chemists' Club.

This investigation was used to illustrate the work being carried out at Illinois in cooperation with various industries.

Henry C. Sherman, medalist of the American Institute of Chemists in 1933, has been awarded the Nichols Medal of the New York Section of the A. C. S. Among the speakers at the award: Lafayette B. Mendel, Institute medalist in 1927; Marston T. Bogert, F.A.I.C.

William A. Hamor, F.A.I.C., is the author of an article in the Pittsburgh *Record* entitled "Argonauts of Science."

Wilder D. Bancroft and **John B. Calkin,** in *Textile Research,* have advanced a new physical theory of mercerization.

Perkin Medal to Fink

Colin G. Fink, F.A.I.C., professor of electrochemistry at Columbia, has been awarded the Perkin Medal of the Society of Chemical Industry. The award was made by a committee representing five national chemical societies.

The medal is awarded each year for valuable work in applied chemistry, and was given to Dr. Fink for his inventions in metallurgy and electrochemistry.

At the meeting held at The Chemists' Club at which the medal was presented, Dr. Fink read a paper on "Chemistry and Art." The presentation was made by Marston T. Bogert, F.A.I.C., a past president of the Society of Chemical Industry.

Mellon Institute

Among the recent investigations announced by Edward R. Weidlein, F.A.I.C., director of the Mellon Institute, are the following:

1. Research on the extent of retention of ingested aluminum. It was found that aluminum contained in foodstuffs does not accumulate in the tissues. The investigation was carried on by five research workers.

2. Survey of the modern solvent industry. By E. W. Reid.

3. Research on heating, with particular attention to air conditioning and development of new products. It was found that cast iron is the most suitable material for finned convectors.

4. Extensive wearing tests on the new Mellon-developed "Vici Special" leather. The experiments demonstrated that this leather needs no dressing to bring out the finish after wear, and that it has unusually good wearing resistance.

Commerce Reports

Charles C. Concannon, F.A.I.C., chief of the Chemical Division of the Bureau of Foreign and Domestic Commerce, has announced that the United States

foreign trade in chemicals showed a 10 per cent improvement in 1933.

Further improvement depends on continued economic recovery in our foreign markets, particularly Europe and Latin America. Low dollar exchange should assist somewhat, and improved silver prices should help temporarily in the Far East.

Looking for Product

The Sharpless Specialty Company, of Philadelphia, intends to expand by developing equipment other than its traditional centrifuges, and is looking for new inventions to develop. The company has sent out the following announcement:

"We would not be interested in household appliances, automobile accessories, or the like that sell in large quantities at a small unit price, unless of exceptional merit. We would prefer one that sells at a large unit price, one that has adequate patent protection, and one that commands a sufficient margin of profit to warrant the development cost. We would, for example, be interested in a new process for one of the process industries, such as a new oil refining process. Again, we would be interested in a new marine device that would sell for $1000 or more per unit."

Research Conferences

Johns Hopkins, through its chemistry department, has instituted a series of research conferences on chemical physics, to be held at Gibson Island between June 25th and July 21st. The purpose of the conference is to have lectures, discussions and demonstrations on frontier problems on the border line of physics and chemistry. Those present will have a chance to acquire the latest information in chemical physics as well as to benefit from the contacts with the specialists in the field. There will be only one formal lecture or conference a day. All the other time will be free for special conferences with the specialists, or for sports on the Island.

Gibson Island was chosen to permit chemists to make the conference a vacation. Sports available are golf, tennis, swimming, and unrivalled fishing in the Chesapeake.

The registration fee is five dollars per week. Further information may be obtained from Neil E. Gordon, Johns Hopkins University, Baltimore, Md.

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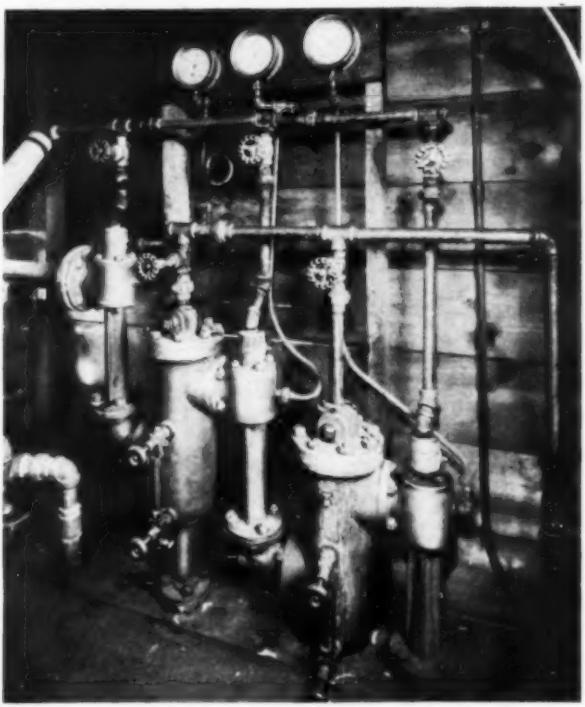

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